

REMARKS

In response to the Office Action mailed on March 22, 2007, Applicants respectfully request reconsideration. To further the prosecution of this Application, Applicants submit the following amendments and remarks discussing patentability of rejected and newly added claims. Applicants respectfully request that the application be passed to issue.

Claims 1-44 were previously pending in the subject Application. Claims 45-49 are being added by way of this amendment. Thus, after entry of this Amendment, claims 1-49 will be pending. No new matter was added to the application when amending or adding these claims.

Applicant are appreciative of the Examiner's review of the claims and allowance of claims 12 and 27.

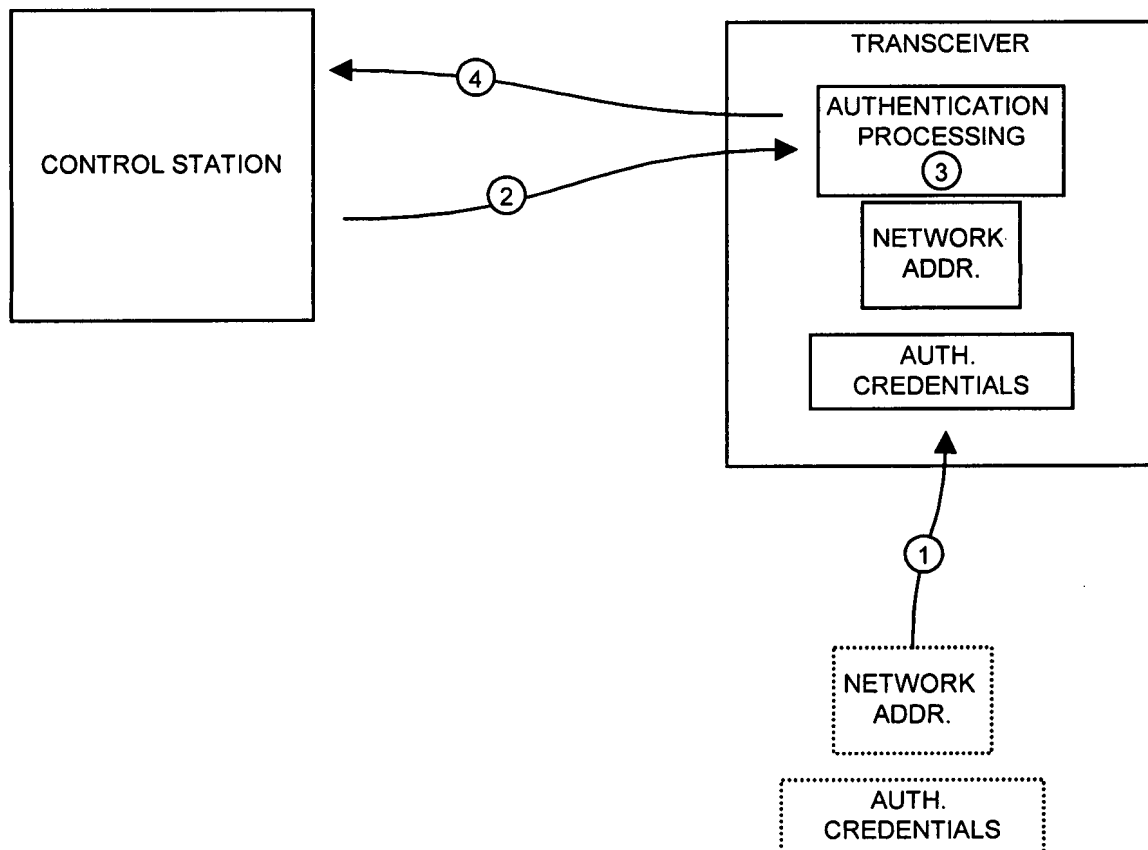
Summary of an Embodiment of the Invention

Prior to discussion of the pending claims, Applicants would like to briefly discuss an illustrative embodiment of the present invention. One embodiment of the present invention, in contrast to conventional approaches, is directed to a technique for authenticating devices in a network such as a Radio Frequency Identification (RFID) Network between control stations and one or more transceivers. A transceiver receives transceiver configuration information including a network address and transceiver authentication credentials and receives an authentication request from the control station. The transceiver applies authentication processing to request information within the authentication request in conjunction with the transceiver authentication credentials to produce an authentication response and transmits the authentication response to the control station to allow the control station to determine if the transceiver is authorized to communicate within the remote identification system.

Rejection of Claims

The Examiner has rejected claim 1 under 35 U.S.C. § 103(a) as being unpatentable over Leivo (U.S. Patent 6,782,080) in view of Devine (U.S. Patent 7,039,611). Applicants are appreciative of the Examiner's review of pending claim 1 and respectfully request further consideration.

Applicant submits the following figure showing steps of the claimed invention recited by claim 1.



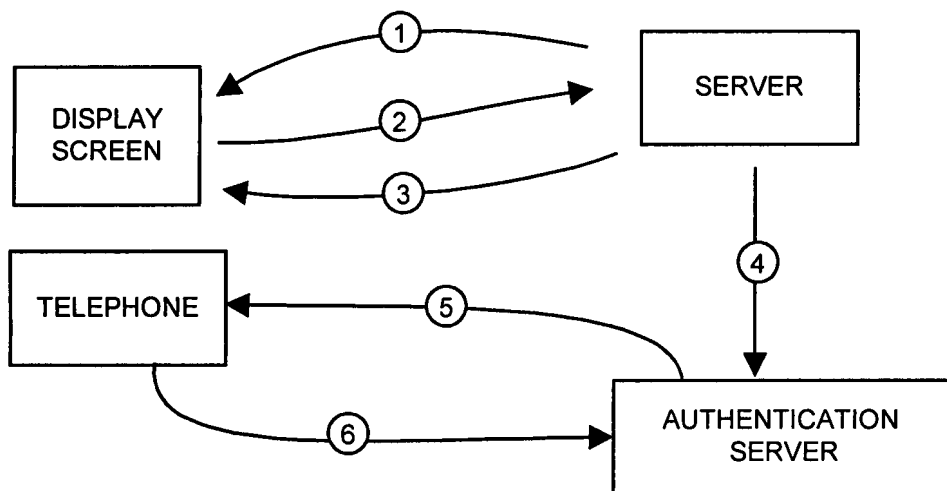
As recited in claim 1, in step 1, the claimed invention recites receiving transceiver configuration information including a network address and transceiver authentication credentials.

In step 2, the claimed invention recites receiving an authentication request from a control station within the remote identification system.

In step 3, the claimed invention recites applying authentication processing to request information within the authentication request in conjunction with the transceiver authentication credentials to produce an authentication response.

In step 4, the claimed invention recites transmitting the authentication response to the control station to allow the control station to determine if the transceiver is authorized to communicate within the remote identification system.

The Examiner likens the claimed invention to Leivo, which includes an authentication server as shown below.



In step 1 of Leivo, the server requests a user identification and password from the user at the display screen.

In step 2, the user provides an appropriate identification and password.

In step 3, the server provides the user with a PIN code and telephone number B.

In step 4, the server sends an authentication request to the authentication server. The authentication request includes the phone number associated with the user's telephone as well as the PIN code provided to the user in step 3.

In step 5, the authentication server initiates a call to the user's telephone.

In step 6, in response to the call from the authentication server, via the user's telephone, the user provides the PIN code to the authentication server.

The office action concedes that Leivo does not disclose "applying authentication processing to request information within the authentication request in conjunction with the transceiver authentication credentials to produce an authentication response." The office action asserts that Devine performs such a function and that it would be obvious to combine the references to produce the claimed invention.

Applicants respectfully disagree with this assertion. The claimed invention includes limitations not cited by either reference. Moreover, the references are directed to different types of technology that, when combined, do not teach or suggest the claimed invention.

More specifically, Devine discloses use of an ACS (Access Control Server) configured to receive a credit card authentication request from a cardholder system 205. The request received at the ACS appears to include a pseudonym value, which apparently is used to identify whether the authentication request is valid. Presumably, the office action equates the request information in the claimed invention to the pseudonym value in Devine.

Note that the method of claim 1 produces an authentication response based on applying authentication processing to information in the request as well as the transceiver authentication credentials. Thus, authentication processing according to the invention involves use of two kinds of information: request

information received in a present request and previously received transceiver authentication credentials.

There is no indication in Devine that the ACS applies authentication processing to previously received authentication credentials received by the transceiver. At most, Devine suggests that the ACS can identify whether a request is valid or not based on the pseudonym in the credit card authentication request message. However, there is no mention in Devine that the ACS is a transceiver, especially one including transceiver credentials or one in which the transceiver supports an operation of receiving corresponding transceiver authentication credentials used for transceiver authentication purposes as recited by the claimed invention.

In Devine, the credit card is the item being authenticated, not the ACS. The claimed invention is directed toward authenticating operation of a transceiver having corresponding transceiver authentication credentials. Accordingly, Devine does not disclose or suggest the limitation of "applying authentication processing to request information within the authentication request in conjunction with the transceiver authentication credentials to produce an authentication response" as recited by claim 1.

Additionally, note that Leivo is directed to authentication of a telephone. Devine is directed to authentication of a credit card. Credit cards and telephones are substantially different types of devices and are used for different purposes. Thus, it would not be obvious to combine these different technologies to produce the claimed invention.

Accordingly, Applicant respectfully requests the Examiner to withdraw the rejection or pass claim 1 to issuance. By virtue of dependency, claims 2-12 and

33-44 depend from claim 1 and therefore also should be in condition for allowance.

Claim 16 includes similar limitations as claim 1 and should be allowable for similar reasons. Accordingly, claim 16 and corresponding dependent claims 17-27 should be in condition for allowance.

Claims 13, 28, and 32 should be allowable for similar reasons as discussed above. Claims 14-15 and 29-30 depend from respective claims 13 and 28 and therefore, by virtue of dependency, also should be in condition for allowance.

Note that each of the dependent claims includes further distinguishing features over the cited prior art. Some of the distinguishing features are discussed below.

Claim 40

Applicant would like to further point out that claim 40 includes further distinguishing language over the cited prior art. For example, claim 40 depends from claim 1 and recites that the step of "applying" in claim 1 includes "based on information in the authentication request, identifying one of multiple authentication instructions maintained at the transceiver; and applying the identified one of multiple authentication instructions to i) a data value in the authentication request received from the control station and ii) an identification code associated with the transceiver to produce the authentication response."

The office action concedes that Leivo does not teach the limitation of "applying ..." as in claim 1. It logically follows that Leivo would not teach the substeps as recited by claim 40 because claim 40 modifies the step of "applying ..." in claim 1.

Applicant respectfully submits that claim 40 includes limitations not recited by Leivo or Devine.

To reject claim 40, the Examiner recites the same passage at column 7 lines 6 through 25, which reads as follows:

First, the web server 25 shows the user a page for a login procedure to be performed. In other words, the user is requested to enter a user id and a password. The user enters the requested information and if the server 25 accepts this information, it shows the user of the telephone 21 a PIN code and subscriber number B which the user is to call for authentication. At the same time, the server 25 issues an authentication request, which contains the telephone number (subscriber number A) of the telephone 21 and said PIN code, to an authentication server 26. Through a GSM network 27 (and possibly through PSTN/ISDN networks 28), the user of the telephone 21 makes a GSM call to subscriber number B given to the authentication server 26 and gives the server 29 said PIN code. The authentication server 26 verifies the response call from the user and informs the web server 25 of the confirmation, as described above. An alternative to the call made by the telephone 21 is that the authentication server 26 calls the telephone 21, in which case the user provides the PIN code.

Merely providing a PIN code via a corresponding telephone as in Leivo is not equivalent nor suggestive of a step of identifying one of multiple authentication instructions maintained at the transceiver based on information in the authentication request. Moreover, Leivo does not recite applying an identified one of multiple authentication instructions to i) a data value in the authentication request received from the control station and ii) an identification code associated with the transceiver to produce the authentication response. In fact, there is no indication in Leivo that the telephone even maintains one authentication

instruction, let alone multiple authentication instructions. It logically follows that the telephone in Leivo would not apply an identified authentication instruction to a data value in the authentication request because the instructions do not exist. Unlike Leivo, this aspect of the claimed invention enables a transceiver to produce an authentication response based on an instruction specified by the authentication request as well as data in the authentication request. For the same reason, Applicant respectfully submits that claim 42 is in condition for allowance.

Further, in addition to the limitations as discussed above, note that claim 40 also recites applying the identified instruction to an identification code associated with the transceiver to produce the authentication response. Leivo also does not recite such a limitation. For example, Leivo only recites that the telephone has a corresponding phone number used to dial the user. Neither the telephone nor user applies one of multiple identified instructions to the phone number to produce the authentication response. Accordingly, Applicant respectfully requests allowance of claims 40 and 42.

Claim 2

Applicant notes that dependent claim 2 includes additional distinguishing features over the cited prior art. For example, claim 2 recites that the transceiver receives a transceiver identification code as well as a transceiver instruction set containing values and corresponding authentication instructions. Applicant respectfully traverses the rejection set forth by the Examiner because the cited language does not recite such specific details associated with authentication. The passage does recite that the telephone can receive a call from the authentication server. However, this is not equivalent to the claim limitations of "receiving transceiver authentication credentials including receiving: i) a transceiver identification code uniquely assigned to the transceiver; and ii) a transceiver instruction set containing a set of authentication values and

corresponding authentication instructions." Accordingly, Applicant respectfully request allowance of claim 2.

Claim 3

Applicant notes that the dependent claim 3 includes additional distinguishing features over the cited prior art. For example, claim 3 recites that receiving transceiver configuration information includes periodically receiving transceiver authentication credentials to replace the transceiver authentication credentials formerly received by the transaction. Applicant respectfully traverses the rejection set forth by the Examiner because the cited language does not recite replacement of any information whatsoever. Accordingly, Applicant respectfully request allowance of claim 3 or request the Examiner to provide proper support for such a rejection.

Claim 4

Applicant notes that the dependent claim 4 includes additional distinguishing features over the cited prior art. For example, claim 4 recites "wherein the request information within the authentication request includes:

- i) an request authentication result; and
- ii) a request data value;

wherein applying authentication processing to request information within the authentication request in conjunction with the transceiver authentication credentials to produce an authentication response comprises:

identifying an authentication instruction that matches the request authentication result; and

applying the authentication instruction that matches the request authentication result to the request data value from the authentication request to produce the authentication response."

Applicant respectfully traverses the rejection set forth by the Examiner because the cited language does not recite such specific details of associated with

authentication. First, there is no indication whatsoever in Leivo that the authentication request sent from the authentication server to the telephone includes a request authentication result or a request data value. Moreover, the cited prior art does perform matching of an authentication instruction based on a request authentication result. Nor does the cited prior art involve applying the authentication instruction that matches the request authentication result to the request data value from the authentication request to produce the authentication response. Accordingly, Applicant respectfully request allowance of claim 4 or clarification of the rejection.

Claim 5

Applicant notes that the dependent claim 5 includes additional distinguishing features over the cited prior art. For example, claim 5 recites "wherein identifying an authentication instruction that matches the request authentication result comprises:

applying an authentication function to authentication values in the set of authentication values within the transceiver authentication credentials to produce corresponding transceiver authentication results; and

for each transceiver authentication result produced, determining if the transceiver authentication result matches the request authentication result for that authentication value, and if the transceiver authentication result matches the request authentication result for that authentication value, performing the operation applying the authentication instruction to produce the authentication response." Applicant respectfully traverses the rejection set forth by the Examiner because the cited language does not recite such specific details of associated with authentication. For example, there is no indication that the Leivo discloses a telephone having a set of authentication values, especially ones to which authentication functions are applied. Moreover, Leivo does not disclose the last limitation of matching as in claim 5.

Claim 8

Contrary to the Examiner's observation, there is no discussion in the cited prior art regarding a repeated attempt to authenticate a transceiver upon each failure. Accordingly, Applicant respectfully requests allowance of claim 8.

Claim 9

Contrary to the Examiner's observation, there is no discussion in the cited prior art regarding a transceiver that receives an authentication result in a authentication request as well as a data value for use by the transceiver to apply a selected instruction. Additionally, the claim recites subsequently receiving a different authentication result and different data value from the control station. The cited prior art additionally does not disclose this limitation as well. Accordingly, Applicant respectfully requests allowance of claim 9.

Claim 33

The Examiner admits that Leivo does not disclose implementing a roll back function in the context of authentication as in the claimed invention. Contrary to the assertion made in the office action, there is also no discussion in Boylan that the rollback functions are used in the context of authentication as in the claimed invention. For example, the claimed invention recites that a request data value in the authentication request indicates an amount by which to roll an instruction set associated with the transceiver. Boylan provides no such function. Thus, the claimed invention includes a limitation not recited by the prior art. Applicant respectfully requests allowance of claim 33.

Claim 35

For similar reasons as claim 33, the claimed invention includes a limitation not recited by the prior art. Applicant respectfully requests allowance of claim 35.

Claim 42

Claim 42 recites: "wherein applying authentication processing to request information within the authentication request in conjunction with the transceiver authentication credentials to produce an authentication response includes: based on information in the authentication request, identifying one of multiple authentication instructions maintained at the transceiver; and applying the identified one of multiple authentication instructions to a data value in the authentication request received from the control station to produce the authentication response."

The office action asserts that Leivo discloses such functionality without providing a specific indication of the corresponding passages that disclose each respective claim limitations. Applicant respectfully submits that Leivo at cited passage column 7, lines 6-25 and column 7, lines 25-54 do not disclose that information in an authentication request is used to identify one of multiple authentication instructions maintained at the transceiver. Nor do the passages recite applying an identified one of multiple authentication instructions to a data value in the authentication request received from the control station to produce the authentication response. Accordingly, Applicant respectfully submits that the rejection of claim 42 is improper.

Claim 43

Claim 43 recites: "wherein applying authentication processing to the request information includes: identifying an authentication instruction that matches a request authentication result received in the authentication request; and applying the authentication instruction that matches the request authentication result to a request data value in the authentication request to produce the authentication response."

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The office action asserts that Leivo discloses such functionality without providing a specific indication of the corresponding passages that disclose each respective claim limitations. Applicant respectfully submits that Leivo at cited passage column 7, lines 6-25 does not disclose identifying an authentication instruction that matches a request authentication result received in the authentication request and applying the authentication instruction that matches the request authentication result to a request data value in the authentication request to produce the authentication response. Accordingly, Applicant respectfully submits that the rejection of claim 42 is improper.

New Claims 45-49

Applicant has added claims 45-49. Support for these claims can be found (among other places) in Fig 1-4 and corresponding text of the application. Each of these claims includes further patentable distinctions over the cited prior art. By virtue of dependency, these claims should be in condition for allowance as well. Thus, Applicants respectfully requests allowance of these new claims.

CONCLUSION

In view of the foregoing remarks, Applicants submit that the pending claims as well as newly added claims are in condition for allowance. A Notice to this affect is respectfully requested. If the Examiner believes, after reviewing this Response, that the pending claims are not in condition for allowance, the Examiner is respectfully requested to call the Applicant(s) Representative at the number below.

If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 50-3735.

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If the enclosed papers or fees are considered incomplete, the Patent Office is respectfully requested to contact the undersigned Attorney at (508) 616-9660, in Westborough, Massachusetts.

Respectfully submitted,



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